

**REMARKS**

Claims 1-16 are pending in this application. Claim 1 is the only independent claim.

By this amendment, claims 1 and 6 are amended.

Reconsideration in view of the above amendments and following remarks is respectfully solicited.

**Final Rejection is Premature**

Applicant respectfully submits that this final rejection is premature because the Examiner failed to initially provide us with the English translation he used to make the rejection. As pointed out to the Examiner in our first response, we were limited in our arguments due to the fact that we were not provided with the English translation that the Examiner apparently relied upon in his rejection.

As such, applicant should have been given ample opportunity to review such information before the Examiner made the rejection final. The English translation was only provided to us with the final Office Action.

As such, applicant respectfully requests that the finality be withdrawn with regards to this office action.

**Allowable Subject Matter**

Please note that the Examiner has only rejected claims 6-8 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph. As such, it stands to follow that claims 6-8 are allowable, but for the 112 rejections.

**The Claims Satisfy The Requirements Of  
35 U.S.C. §112, 2<sup>nd</sup> Paragraph**

The final Office Action rejects claims 6-8 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph. This rejection is respectfully traversed.

Applicant respectfully submits that the amendment to claim 6 obviates the rejection of claims 6-8 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph.

Accordingly, withdrawal of the rejection of claims 6-8 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph is respectfully solicited.

### **The Claims Define Patentable Subject Matter**

The final Office makes the following rejections:

(1) claims 1-5 and 13-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent No. 11127211 A to Matsuura (hereafter Matsuura) in view of U.S. Patent No. 5,155,453 to Ruetz (hereafter Ruetz); and

(2) claims 9-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuura in view of Ruetz and further in view of Publication No. 2004/0166799 to Kral (hereafter Kral).

These rejections are respectfully traversed.

Applicant respectfully submits that the claimed invention is distinguishable from the combination of Matsuura and Ruetz for at least the following reasons:

The Examiner alleges that Matsuura discloses a cable modem tuner comprising a down converter circuit (47 and 58) for selectively outputting an intermediate frequency signal of the first frequency band (output 15) or a second frequency band lower than said first frequency band (output 35). (see final Office Action, pages 3-4). Applicant respectfully disagrees with this allegation.

For example, applicant submits that Matsuura merely discloses that the down converter is represented by reference numeral 58, not also reference numeral 47. In Matsuura, reference numeral 58 (the down converter) is enclosed by a dashed line and includes the 2<sup>nd</sup> intermediate frequency amplifying circuit 48, a mixer circuit 49, a local oscillator circuit 50, a low pass filter 51 and a post-amplifying circuit 52. As such, we believe one skilled in the art would recognize that the elements that are enclosed in the dashed lines are what make up the down converter.

On the other hand, reference numeral 47 is excluded from the dash lines. In other words, in Matsuura reference numeral 47 is merely a buffer amplifier, which is not disclosed as being

included in the down converter circuit 58. (see Matsuura, paragraphs [0031], [0032] and [0037]; and Fig. 1).

Furthermore, in the claimed invention it is the down converter circuit which selectively outputs either an intermediate frequency of the first frequency band or an intermediate frequency of a second frequency band lower than the first frequency band.

In contrast with the present invention, Matsuura merely discloses that its down converter 58 uses a local oscillator circuit 50 that is a fixed oscillator circuit by a quartz resonator. (see Matsuura, paragraph [0031]). As such, Matsuura's down converter circuit 50 fails to be able to selectively output an intermediate frequency signal of the first frequency band or of a second frequency band lower than the first frequency band.

For example, the Examiner alleges that in Matsuura, the first frequency band output is output 15, and the second frequency band, which is lower than the first frequency band output is output 35. (see final Office Action, page 4). However, output 15 fails to be an output of the down converter circuit 58, but is instead an output of the tuner circuit. As such, applicant submits that output 15 cannot be said to be a selective output of the down converter circuit 58.

Furthermore, applicant respectfully submits that the Examiner has failed to show where Matsuura discloses that there is a second frequency band that is lower than the first frequency band, as claimed.

Furthermore, the Examiner concedes that Matsuura fails to disclose a local oscillating circuit for generating an oscillation signal corresponding to the second frequency band in a first mode..., and stopping generation of the oscillation signal in a second mode, as set forth in claim 1. (see final Office Action, page 4). In other words, Matsuura fails to utilize the oscillation circuit 50 for selectively outputting an intermediate frequency.

In an attempt to make up for the deficiencies found in Matsuura, the Examiner imports Ruetz..

Specifically, the Examiner alleges that Ruetz discloses an oscillator means with dual output modes, that is controlled by an external control means, such that the oscillator generates an oscillating output signal in a first, "normal", mode of operation and stops generating an oscillating output signal in a second "sleep" mode. (see final Office Action, pages 4-5). The

Examiner further alleges that it would have been obvious to modify the down converter means of Matsuura by using a dual-mode oscillator as taught by Ruetz... thereby allowing circuit 47 to be integral to circuit 58 of Matsuura. We disagree with these allegations.

For example, applicant submits that Ruetz merely discloses a power saving sleep mode for reducing power consumption. As such, in Ruetz, when the sleep mode (first mode) is being used the output circuit is disabled, because no output oscillation signal having a required electrical characteristic is being outputted. Furthermore, in Ruetz, in the normal mode (second mode), the oscillation signal is supplied adequately.

However, Ruetz fails to disclose that its oscillator generates an oscillation signal corresponding to a second frequency band that is lower than the first frequency band. For example, in the claimed invention it is specifically recited that: "...a second frequency band lower than said first frequency band; ...a local oscillation circuit generating an oscillation signal corresponding to said second frequency band in a first mode...". Applicant submits that both Matsuura and Ruetz fail to disclose a signal corresponding to the second frequency band (lower than the first frequency band) being generated by the local oscillating circuit, as claimed in the present invention.

Furthermore, the Examiner alleges that circuit 47 of Matsuura could be integral with circuit 58 of Matsuura if the dual-mode oscillator of Ruetz was added to Matsuura. Applicant respectfully disagrees with this allegation.

Neither Matsuura nor Ruetz discloses how or why one would add such a dual-mode oscillator to the configuration of Matsuura or how circuit 47 would be modified accordingly. Circuit 47 in Matsuura has nothing to do with the oscillation circuit 50. Applicant submits that the Examiner is merely attempting to arrive at a single output node and is merely using improper hindsight in order to arrive at the claimed invention, without providing a proper motivation for making the alleged modification. Applicant submits that neither Matsuura nor Ruetz discloses/suggests such a modification. If arguably Matsuura discloses both a first frequency band output at terminal 15 and a second frequency band output at terminal 35 as alleged by the Examiner (which we believe it fails to disclose), then it goes to follow that Matsuura would not be motivated to add Ruetz's dual-mode oscillator.

In any case, applicant submits that the Examiner has failed to show each and every feature in the combination of Matsuura and Ruetz and we also believe the Examiner is attempting the paste features from two different references together to arrive at the claimed invention, without providing proper motivation for doing the same and without showing whether such a modified configuration is even feasible for Matsuura.

Furthermore, Matsuura describes in paragraph [0030] that if input terminal 1 receives an analog signal the intermediate frequency signal output from intermediate frequency amplification circuit 44 is input via buffer amplifier 47 to output terminal 15, and if input terminal 1 receives a QAM modulated signal then the intermediate frequency signal output from intermediate frequency amplification circuit 44 is down converted in frequency by down converter 58 and thus input to output terminal 35. As such, mixer circuit 49 of down converter 58 of Matsuura only outputs a signal having a frequency lower than an input intermediate frequency signal. In contrast with Matsuura, claim 1 in the present application recites, *inter alia*, a mixer circuit of a tuner for a cable modem that in a first mode lowers an input intermediate frequency signal of a first frequency band in frequency to output an intermediate frequency signal of a second frequency band and in a second mode outputs an intermediate frequency signal of the first frequency band. Thus, claim 1 clearly recites a tuner that distinguished over Matsuura's system.

For at least the reasons noted above, we believe the present invention is distinguishable from the cited combination of art.

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Applicant respectfully submits that the combination of cited art fails to teach or suggest each and every feature as set forth in the claimed invention.

Applicant respectfully submits that independent claim 1 is allowable over the cited art for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejections of claims 1-5 and 9-16 under 35 U.S.C. §103(a) is respectfully requested.

**Conclusion**

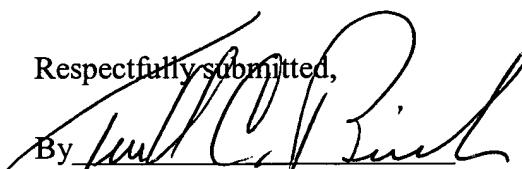
In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 **to schedule a Personal Interview.**

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

Dated: March 10, 2006

Respectfully submitted,

By   
Teyrell C. Birch

Registration No.: 19,382  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant

TCB/CTB/mpe